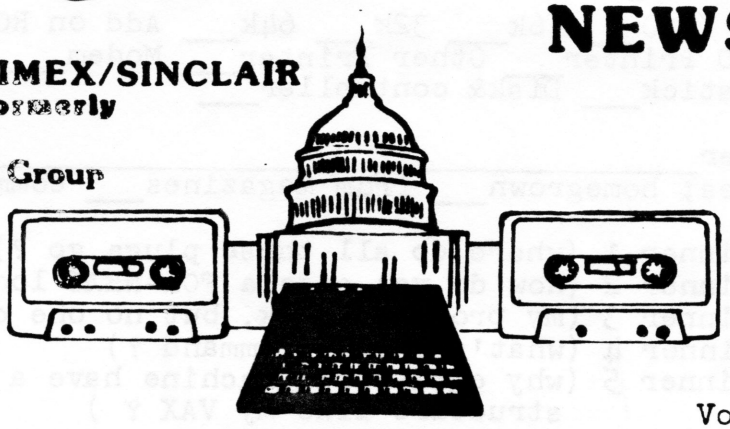
CHESS Page 3

CATS NEWSLETTER

CAPITOL AREA TIMEX/SINCLAIR USERS GROUP :Formerly Prince George's Timex/Sinclair User's Group



Vol 1, No. 7
October, 1983

CONTENTS

SINCLAIR USER'S GROUP CELEBRATION

INVITATION YOU ARE INVITED TO JOIN THE BOSTON COMPUTER SOCIETY'S SINCLAIR-TIMEX USER GROUP IN CELEBRATING THEIR SECOND ANNIVERSARY BY ATTENDING:

THE TIMEX SINCLAIR CELEBRATION
SATURDAY, OCTOBER 22, 1983, 10 A.M. TO 6 P.M.
BOSTON PARK PLAZA HOTEL
ARLINGTON STREET, PARK SQUARE. (DOWNTOWN)
BOSTON, MASS.

THERE WILL BE WORKSHOPS ON: COMPUTER LITERACY; DEMONSTRATIONS OF APPLICATIONS FOR USE IN THE HOME AND WORK; USING THE TIMEX SINCLAIR COMPUTER IN THE CLASSROOM; SEMINARS ON HOW TO START YOUR OWN COTTAGE INDUSTRY; AND MORE!

ALSO, THERE WILL BE VENDORS DEMONSTRATING AND SELLING PRODUCTS THAT ARE COMPATIBLE WITH TIMEX SINCLAIR COMPUTERS E.G. PERIPHERALS, SOFTWARE, PUBLICATIONS, AND SERVICES. PLUS A LOCAL TIMEX COMPUTER RETAILER WILL HAVE A FULL LINE OF COMPUTER PRODUCTS (HARDWARE AND SOFTWARE) ON HAND.

ADMISSION: $3.00 GENERAL ADMISSION. $5.00 FAMILY. $2.00 MEMBERS OF CATS.

FOR FURTHER INFORMATION ABOUT TRANSPORTATION AND LODGING PLEASE CONTACT JULES GESANG, 301-922-0767 AFTER 6 P.M. ALSO A PARTY FRIDAY NIGHT OCT. 21. ALL CATS MEMBERS ARE INVITED FRIDAY NIGHT TO A CLOSED AFFAIR. MAKE YOUR RESERVATIONS EARLY. THERE ARE A LIMITED NUMBER OF DISCOUNTED HOTEL ROOMS.

CATS Membership survey

Equipment owned: quantity

T/S 1000___ 16k___ 32k___ 64k___ Add on ROM board___
2040 Printer___ Other Printer___ Modem___ Large keyboard___
Joystick___ Disk& controller___

Other_____
Tapes; homegrown___ from magazines___ commercial___

Background:

Beginner 1 (where do all these plugs go ?) ___
Beginner 2 (how do you code a FOR-NEXT loop ?) ___
Beginner 3 (my programs work, but no one can read them) ___
Beginner 4 (what's a LDIR command ?) ___
Beginner 5 (why can't this machine have a decent i/o structure like my VAX ?) ___

Why are you with us ? (more than one answer is OK)

To learn BASIC___ To learn machine code___ To meet others that are working on this machine___ To learn about new equipment___ To learn about new programs___ To learn how to use commercial programs___

Other_____

What kind of club do you want ?

The biggest on the East Coast___
The most helpful on the East Coast___
The friendliest on the East Coast___

Other_____

How would you change the meetings

They're perfect___ More product demo's___ More program demo's___ More info for beginners___ More info for advanced___ Separate small interest groups (sig's)___ More time to talk to those around me___ More tutorials___

Other_____

How would you change the newsletter ?

It's perfect___ More general articles___ More program reviews___ More book reviews___ More hardware reviews___ More tutorials___ News from other clubs___ Advertising___ Program mods___

Other_____

WHAT WILL YOU DO TO ACHIEVE THE ABOVE ?

Nothing___ Help on committees if called___ Write for the newsletter___ Volunteer for committees___ Start committees___ Coodinate committees___

Other_____

Potential committees: (and existing ones)

BASIC Education___ M/C Education___ Newsletter___
Library___ Inter-club communication___ Newsl. Advertising___
Publicity___ MEETING PLANNING___ Membership___ Contests___

.....

SKILL LEVEL

Yours 0..1..2..3..4..5..6..7..8..9
Meetings 0..1..2..3..4..5..6..7..8..9
Newsletter 0..1..2..3..4..5..6..7..8..9

Name & Address, if you would like to help.

_____

FROM THE EDITOR

We've got a variety of items for you this month. Number one in my estimation is the member survey, on the facing page. I want to encourage you to read it over, fill it out, and either bring it in to the next meeting, or mail it to the club PO box. If you don't want to deface the newsletter, you can Xerox it, or fill out one of the copies that will be available at the next meeting.

We also have our first review of a T/S 2068 program, T/S Chess, and a preview of Steve Johnson's tutorial. It's really good to see a variety of contributors--keep sending in those contributions ! I've had promises of varying degrees of firmness for articles from quite a few members--you'd be suprised at what some members are up to.

Two bits of Timex news, from opposite ends of the Spectrum. 1) The 1500 is in the pipeline: by the time you read this, it should be at Maryland Book Exchange and Greetings and Readings. 2) In line with the general poor health of all small computers except Commodore and IBM, Timex has laid off another group--

Cont. on p.6

**** GAME PLAYING ON THE ****
T/S 2068

CHESS REVIEW BY MIKE COHEN

CHESS ON THE 2068 IS A WELL THOUGHT OUT GAME. IT GIVES YOU MULTI-STAGES OF CHALLENGE; AND WILL NOT GIVE UP, WHERE A HUMAN MIGHT GET DISCOURAGED.

LOADING THE NEW MACHINE WAS A SNAP, TAKING 1 MINUTE 30 SECONDS TO LOAD. ONCE THE PROGRAM IS LOADED IT GIVES YOU A CHOICE OF SCREEN COLOR FOR BOARD AND MEN (THE DEFAULT VALUE IS A TASTEFUL BLACK+WHITE BOARD ON A BLUE FIELD). NEXT IT REQUESTS YOUR LEVEL OF PLAY. I PLAYED LEVEL FOUR.

WHITE ALWAYS PLAYS FIRST. IT WAS NOW MY CHOICE TO PLAY WHITE OR BLACK. IT MIGHT HAVE BEEN INTRIGUING TO TAKE BLACK, TO TEST MY DEFENSIVE PLAY, AND TO SEE HOW THE PROGRAM ATTACKS. I CHOSE WHITE. THERE IS NO TIME LIMIT ON YOUR MOVES, AND THE MACHINE RARELY TOOK LONGER THAN FOUR MINUTES TO DECIDE ON ITS OWN.

AT THE START OF THE GAME AGAINST AN OPPONENT PLAYING WHITE, ITS STRATEGY IS REACTIVE, SEEKING TO WEAR YOU DOWN WITH GOOD DEFENSE. THE ONLY COMPLAINT I HAVE AT THIS POINT IS THAT THE PROGRAM DOES NOT DISPLAY THE CAPTURED PIECES OF EITHER SIDE. IT DOES LIST AND NUMBER EACH MOVE.

THE GAME TOOK TWO HOURS TO PLAY, MORE FROM MY DEBATING AND CHECKING EVERY MOVE THAN FROM THE MACHINE"S DELAY. THIS IS A VERY COMPETENT CHESS PROGRAM--I MUST STRESS THAT IF YOU MAKE A MISTAKE IT WILL GET YOU. DO NOT GET CAUGHT IN THE UNAWARES.

MIDDLE GAME WAS DIFFERENT FROM PLAYING A HUMAN OPPONENT. WITH A HUMAN, BY THIS TIME, YOU HAVE TAKEN HIS MEASURE, AND CAN MAKE A GAMBIT ACCORDINGLY, WITH A GOOD IDEA OF ITS OUTCOME. THE MACHINE ANALYZES EACH PART OF THE GAMBIT IN ITS RELATION TO THE GAME; IN A FORCED GAMBIT, IT WILL MAKE THE MOVE LEAST DAMAGING TO IT.

THE PROGRAM"S ENDGAME WAS VERY GOOD. IF YOU ARE WINNING IT WILL FIGHT YOU EVERY MOVE. IF IT CAN NOT WIN, IT WILL DO ITS BEST TO DRAW THE GAME. BE EXTRA CAREFUL DURING ENDGAME.

THE FOLLOWING APTLY DESCRIBES THIS PROGRAM.

> THE CHESSBOARD IS THE WORLD, THE PIECES ARE THE PHENOMENA OF THE UNIVERSE, THE RULES OF THE GAME ARE WHAT THEY CALL THE LAWS OF NATURE. THE PLAYER ON THE OTHER SIDE IS HIDDEN FROM US. WE KNOW THAT HIS PLAY IS ALWAYS FAIR, JUST, AND PATIENT. BUT ALSO WE KNOW TO OUR COST THAT HE NEVER OVERLOOKS A MISTAKE OR MAKES THE SMALLEST ALLOWANCE FOR IGNORANCE.
>
> THOMAS HUXLEY

OH, BY THE WAY, I WON.

MC

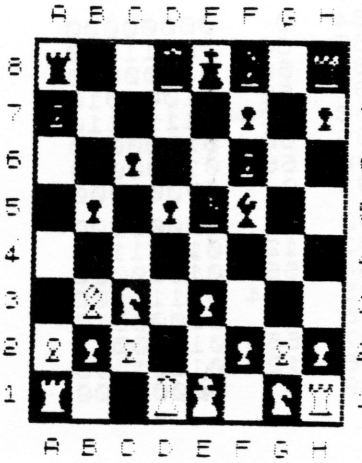
YOU ME Masterchess

(sample game, not the game as reviewed)

D2-D4	G8-F6
B1-C3	B8-C6
C1-G5	E7-E5
E2-E3	D7-D5
D4-E5	C6-E5
F1-B5	C7-C6
B5-A4	B7-B5
G5-F6	G7-F6
A4-B3	C8-F5

Level 0

Move 10



ROM CHARACTER REPRESENTATION
BY RICK WHITE

THE TS1000 USES 64 DIFFERENT PRINTABLE CHARACTERS, AND EACH ONE IS REPRESENTED IN THE ROM BY EIGHT BYTES. SO THE ROM HAS 64*8=512 BYTES SET ASIDE FOR THIS INFORMATION, FROM ADDRESS 7680 TO 8191. THE CONTENTS OF EACH BYTE, IN BINARY FORM, REPRESENTS ONE-EIGHTH OF A PRINTED CHARACTER. EACH GROUP OF EIGHT BYTES IS STORED IN THE ROM IN THE ORDER LISTED ON PAGE 137 OF THE USER MANUAL. THE ADDRESS OF THE FIRST BYTE FOR ANY GIVEN CHARACTER MAY BE GIVEN BY THE FOLLOWING EXPRESSION:

ADDRESS = 7680 + 8*CODE "X"

WHERE "X" MAY BE SUBSTITUTED BY ANY REGULAR-VIDEO (NOT INVERSE) CHARACTER YOU WISH. THIS WAS THE TECHNIQUE USED IN LAST MONTHS "BIG-PRINT" BANNER PROGRAM. THE FOLLOWING PROGRAM WILL PRINT THE CHARACTER REPRESENTATION DATA IN THE ROM. IF YOU DONT HAVE A PRINTER, YOU MAY SUBSTITUTE "PRINT" FOR "LPRINT" IN LINES 20, 40, 100, AND 140, AND ADD:
145 SCROLL
TO DISPLAY THIS INFORMATION.
DE KAST

```
 10 DIM A$(8)
 20 LPRINT AT 21,0;"ADDR";TAB 8
;"DEC";TAB 11;"BINARY";TAB 22;"C
HARACTER"
 30 FOR I=7680 TO 8191
 40 IF I=8*INT (I/8) THEN LPRIN
T
 50 LET X=PEEK I
 60 FOR J=8 TO 1 STEP -1
 70 LET A$(J)=STR$ (INT (X-2*IN
T (X/2)))
 80 LET X=INT (X/2)
 90 NEXT J
100 LPRINT I;TAB 6;PEEK I;TAB 1
0;A$;
110 FOR J=1 TO 8
120 LET A$(J)=CHR$ (128*VAL A$(
J))
130 NEXT J
140 LPRINT TAB 22;A$
150 NEXT I
```

P.S. CORRECTION: IF YOU DONT HAVE A PRINTER, THEN CHANGE THE "LPRINT" TO "PRINT" IN LINES 20, 100, AND 140. CHANGE "LPRINT" TO "SCROLL" IN LINE 40, AND ADD THE EXTRA LINE "SCROLL" AT LINE 35, NOT LINE 145.

```
7984   0    00000000
7985   60   00111100
7986   66   01000010
7987   66   01000010
7988   126  01111110.
7989   66   01000010
7990   66   01000010
7991   0    00000000

7992   0    00000000
7993   124  01111100
7994   66   01000010
7995   124  01111100
7996   66   01000010
7997   66   01000010
7998   124  01111100
7999   0    00000000
```

THE MYSTERIOUS "MOVING CURSOR" by Lloyd Unsell

At a meeting a couple of months ago, I brought a program I had written and Mark Fisher and others were intrigued by my moving "cursor", which moved down the screen to indicate the next piece of data to be input by the user.
Here is a screen printout of one of the routines from that program, showing my "moving cursor" indicating that item 1, cash on hand-is to be input by the user:

```
    ASSETS:

1. CASH ON HAND:  $
2. ACCTS.REC.:    $
3. INS.CASH VAL.: $
4. OTHER SECUR.:  $
5. REAL ESTATE:   $
6. INVENTORY:     $
7. FURN./EQUIP.:  $
8. OTHER ASSETS:  $
```

And here is the program routine that does it:

```
 75 PRINT "    ASSETS:"
 80 PRINT '''"1. CASH ON HAND:"'
"2. ACCTS.REC.:"''"3. INS.CASH V
AL.:"'"4. OTHER SECUR.:"'"5. REA
L ESTATE:"''"6. INVENTORY:"'"7.
 FURN./EQUIP.:"'"8. OTHER ASSETS
:"
 85 FOR I=2 TO 9
 90 PRINT AT I,17;"$"
 95 NEXT I
 96 LET TA=0
 98 PRINT AT 21,0;"ITEM  ?
                    "
100 FOR N=1 TO 8
102 PRINT AT N+1,2;"*"
105 PRINT AT 21,5;N
110 INPUT B$(N)
115 LET TA=TA+VAL B$(N)
125 PRINT AT N+1,25-LEN STR$ VA
L B$(N);B$(N)
130 PRINT AT N+1,2;" "
135 NEXT N
```

The moving cursor is accomplished by lines 102 and 130-inside the FOR-NEXT loop from 100 to 135. Just in case they miss the cursor, lines 98 and 105 tell them verbally which item is to be inputed. Line 115 keeps a "running total" of the total assets (B$ was dimensioned earlier, and TA is established at Ø by line 96). Line 125 prints the inputed values-lined up from right to left, as an addition column. Hope this is of help to some of you.

::::::::::::::::::::::::::::::::::

WANTED TO BUY: T/S 1000 or ZX 81 & 16k RAM (struggling student)
Ernie Falcone 460-0993 after 6:00
301
Bladensburg Md 20710

****** THE VISIBLE SORT ******

HERE IS THE LISTING FOR THE SORT DISPLAY THAT WAS DEMONSTRATED AT THE LAST MEETING.

THE PROGRAM WAS TRANSLATED FROM AN APPLESOFT LISTING IN CREATIVE COMPUTING. IT WENT FAIRLY EASILY. 16K IS REQUIRED--IT MAKES LAVISH USE OF VARIABLES.

THE PROGRAM IS DESIGNED TO BE EASY FOR THE USER TO RUN; THIS ALMOST GUARANTEES THAT THE CODE WILL BE DIFFUCULT TO FOLLOW.

LINES 0-100 SET UP THE ARRAYS AND PROVIDE THE INSTRUCTIONS. LINES 101 TO 196 PLOT THE RANDOM POINTS,BOTH TO THE SCREEN AND TO THE POSITION ARRAY. LINE 210 LEAVES THE T/S IN FAST MODE WHILE THE SCREEN IS BEING BUILT. YOU COULD INSERT IT AS LINE 105 IF YOU PREFER TO WATCH THE SCREEN BEING BUILT. LINES 201 TO 300 PROCESS THE USER"S CHOICE FROM THE MENU. LINES 300-480 DO THE BUBBLE SORT; THE LINES THAT INCLUDE PLOT AND UNPLOT JUST ALLOW YOU TO FOLLOW THE ACTION. LINES 500-770 DO THE SHELL SORT, WHILE LINES 900-ON ARE RESERVED FOR WHATEVER ALGORITHM YOU THINK UP.

THE OPERATION OF THIS PROGRAM SHOWS THE SHELL SORT TO BE MUCH MORE EFFICIENT THAN THE BUBBLE SORT. THIS IS NOT ALWAYS THE CASE; IF YOU ARE MERGING TWO FILES, SO THAT THE DATA ARE ALREADY CLOSE TO THEIR FINAL POSITION, THE SHELL SORT WILL ACTUALLY SCRAMBLE THE DATA BEFORE IT PUTS THEM IN THEIR FINAL ORDER.

THE VARIABLES.

S(39)	SAMPLE ARRAY-HOLDS THE VALUES
X	UTILITY COUNTER
D	CARRIES RANDOM VALUE TO S(X)
MO	MOVE COUNTER
Y	UTILITY COUNTER FOR NESTED LOOPS
Q$	QUERY STRING, ALSO TELLS WHETHER OR NOT ANY SWAPS HAVE BEEN MADE

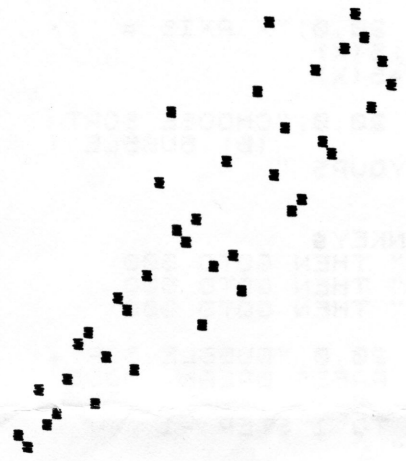
SHELL SORT VARIABLES

M	MAGNITUDE-SIZE OF SWAPS
X	LOWER ITEM TO COMPARE
Y	UPPER ITEM TO COMPARE
J	INNER LOOP COUNTER

HAVE FUN--THERE"S A LOT HERE TO STUDY, AND INCORPORATE INTO YOUR OWN FILE PROGRAMS.

```
  10 FAST
  20 DIM S(39)
  30 PRINT ,,,,,,,,,,"THIS PROGR
AM PROVIDES A SLOW    MOTION DIS
PLAY OF 2 COMMON SORT ALGORITHMS
"
  40 PRINT ,,,,,,"PRESS A KEY TO
 CONTINUE"
  50 PAUSE 4E4
  60 CLS
  70 PRINT ,,,,,,"FIRST, POINTS
WILL BE PLOTTED INA RANDOM ORDER
.",,,,"THEY WILL THEN BE SORTED
TO FORMA DIAGONAL LINE."
  80 PRINT ,,,,,,"PRESS A KEY TO
 CONTINUE"
  90 PAUSE 4E4
 100 CLS
 110 LET Q$="0102030405060708091
0111213141516171819202122232425262728293031323334353637383 9"
 120 FOR X=1 TO 39
 130 LET D=1+INT (RND*LEN Q$/2)*
2
 140 LET S(X)=VAL Q$(D TO D+1)
 150 LET Q$=Q$( TO D-1)+Q$(D+2 T
O )
 160 PRINT AT 20,0;"
                    "
 170 PRINT AT 20,0;"X AXIS = ";X
;" Y AXIS = ";S(X)
 180 PLOT X,4+S(X)
 190 NEXT X
 200 PRINT AT 20,0;"CHOOSE SORT
ALGORITHM              (B) BUBBLE (
S) SHELL (Y) YOURS "
 210 SLOW
 220 LET MO=0
 230 LET Q$=INKEY$
 240 IF Q$="B" THEN GOTO 300
 250 IF Q$="S" THEN GOTO 500
 260 IF Q$="Y" THEN GOTO 900
 270 GOTO 230
 300 PRINT AT 20,0;"BUBBLE SORT.
 IF YOU TIRE, PRESS BREAK. MOVE
= 1                 "
 310 FOR Y=39 TO 1 STEP -1
 320 LET Q$=""
 330 FOR X=1 TO Y-1
 340 PLOT X,4
 350 IF S(X)<S(X+1) THEN GOTO 44
0
 360 LET Q$="Y"
 370 LET MO=MO+1
 380 UNPLOT X,4+S(X)
 390 UNPLOT X+1,4+S(X+1)
 400 LET T=S(X)
 410 LET S(X)=S(X+1)
 420 LET S(X+1)=T
 430 PLOT X,4+S(X)
 440 PLOT X+1,4+S(X+1)
 450 UNPLOT X,4
 460 NEXT X
 470 IF Q$="Y" THEN NEXT Y
 480 GOTO 760
 500 PRINT AT 20,0;"SHELL SORT.
                    MOVE =
                   "
 510 LET M=39
 520 LET M=INT (M/2)
 530 IF M=0 THEN GOTO 760
 540 PRINT AT 21,8;M;"  "
 550 LET J=1
 560 LET X=J
 570 LET Y=X+M
 580 PLOT X,4
 590 PLOT Y,4
 600 IF S(X)<S(Y) THEN GOTO 730
 610 LET MO=MO+1
 620 UNPLOT X,4+S(X)
 630 UNPLOT Y,4+S(Y)
 640 LET T=S(X)
 650 LET S(X)=S(Y)
 660 LET S(Y)=T
 670 PLOT X,4+S(X)
 680 PLOT Y,4+S(Y)
 690 UNPLOT X,4
 700 UNPLOT Y,4
```

```
710 LET X=X-M
720 IF X>=1 THEN GOTO 570
730 UNPLOT X,4
740 UNPLOT Y,4
750 LET J=J+1
760 IF J>39-M THEN GOTO 520
770 GOTO 560
780 PRINT AT 20,0;"
                   "
790 PRINT AT 20,0;"COMPLETE";MO
;" MOVES REQUIRED","TOUCH KEY TO
REPEAT, OR BREAK"
800 PAUSE 4E4
810 FAST
820 CLS
830 RUN
900 PRINT AT 20,0;"NO ALGORITHM
ENTERED.
                   "
910 PAUSE 150
920 GOTO 200
1000 SAVE "SOR"
1010 RUN
```



```
SHELL SORT.
MOVE =  4
```

From The Editor, cont.

this time including Sue Mahoney. Now she'll have more time to spend on the Sinclair celebration.

On the club side, there are two events on the horizon. 1) Hank Dickson's last computer literacy class will be held on the morning of the 8th. If you want to help, or lend computers, contact me at 589-7407. Several folks at the last meeting offered to help, but I didn't write it down--let me know again. 2) A class in using Vu-Calc is being developed--contact Jim Wallace or come to the meeting to find out about it.

At the meeting ? Jim says that he'll bring his Morse code interface, Ned Beeler will expand on his list program, and Steve Johnson will tell us about planning how to plan.

Mark Fiala

NOTES FROM THE NEWSLETTER EXCHANGE COMMITTEE:

As mentioned last month we have received responses from several other user groups. A total of 90 introductory letters and sample newsletters will have been sent by this months meeting. Any groups actively reciprocating will be maintained on our exchange list. When we receive additional responses we will publish this list in CATS-NL.

We currently have a card file of approximately 150 user groups for contacting, including several in Canada, Guam, Brazil and Panama.

A synopsis of the material I have on hand follows:

SYNAPSE, Centre Hall, Pa.:

Jul-83: Articles on 5 compilers (MCODER, ZXCOMPILER, ZXPRESS and ZXCLP:A&B). Review on a statistics package called SIFT from Compucraft.

TRIANGLE SINCLAIR U.G., Carrboro,NC:

Mar-83: Article on "Quick Fix for RF Interference", "64K Dynamic RAM-Theory of Operation" & schematic, 32-48K MC Decoder Board schematic, programs on "Read/Data" and "ROM Clock" from BCS. Software review on "ZEXTRA" from Santa Fe Software.

APR-83: Program "Planets" by Robert Parks, book list for ZX/TS, Save/Load tips, Add on Keytops from Mule Electronics.

May-83: Review on Votem: analog signal interface from Down East Computers and the Byte Back 64K RAM. Program listings "The Word"(Mastermind type) and "Chart"(paper chart simulation) both by Alger Salt. Review of "Multiprogram Demo" by Fred Nachbaur and an article by Wayne Blackwell, "Computing on a Shoe-string".

Jun-83: Review of "Mazogs" and "The Spyder Character Board". Listings for 3 programs to reverse the order of letters in a word and a letter from Syntax editors.

Jul-83: Review of selected new products and of a NL by Fred Nachbaur called "Syncware News". Program listings of "Ramcheck" by L.Holt for trouble-shooting to the chip level,

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620 UNPLOT X,4+S(X)
630 UNPLOT Y,4+S(Y)
640 LET T=S(X)
650 LET S(X)=S(Y)
660 LET S(Y)=T
670 PLOT X,4+S(X)
680 PLOT Y,4+S(Y)
690 UNPLOT X,4
700 UNPLOT Y,4
```

"Budget" by Art Young for home budget planning and reprint with corrections of "Planets".

Aug-83: Reprints of portions of newsletters from TS USER, TAS BAM, SYNAPSE,SYNTAX, TIMEX COMPUTER NEWS (SE Regional Newsletter) and letter from SYNCHMASTER.

The newsletters we receive will eventually be cross-indexed by the articles they contain.
Steven Johnson,NLX-Committee

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The following article is a preview of the tutorial that Steve Jo nson will bring to the October meeting. A lot has been said about the details of coding in past tutorials, but the very important first step, defining the problem, has been ignored. It's as though a sculpting class was taught only the final finishing steps, while ignoring the pr liminary shaping of the block.

MF

ORGANIZED PROGRAM DEVELOPMENT

There are two major steps involved in solving a problem. The first is understanding and defining the problem thoroughly. The second is actually solving the problem. These two steps apply directly to computer programming, whether at the beginner or advanced level. Simply stated, you cannot write a program for a useful purpose until you know that purpose. This seems logical enough, but too often we sit down and attempt to program our computers before we have actually thought out the problem and a possible solution.

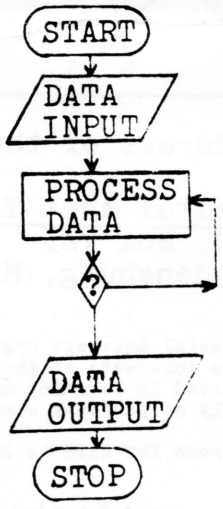
When I attempt a serious application, I don't even touch the keyboard until testing the program. Getting your thoughts down on paper allows you to see more clearly the organization of your program. Starting first with an outline of the major parts of the program is very useful for keeping track of what each portion of the program has to accomplish. An outline with indented sublines or a conventional flow-chart can be used. I normally use a block diagram with flow-chart symbols, unless it is for documentation.

Each block or module can now be approached one at a time on separate sheets of paper. Soon you will discover the need to keep variable names straight. The easiest way is to make a table of the variable names, what they represent and what kind of data they contain (ie, numerical, string or dimensioned forms of either).

If you have followed all of the above steps, your program will be well organized and much easier to visualize and document. Complex programs just cannot be maintained in our heads, so pencil and paper (along with a large eraser) become indispensible programming tools.

Computers reduce the amount of paper-work for the end-user, not the programmer. These techniques are carried into top-down, modular and structured programming.

GENERALIZED FLOW-CHART AND ASSOCIATED PSEUDOCODE



Beginning of program.

Input information (names, acct #s, etc.)

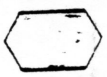
Proceedure (sum amt's, alphabetize, etc.)

Decision point(IF/THEN) (Test for finished -processing)

Print out a report to screen or printer. (or save on tape)

End of program.

*Use arrows to show direction of flow through the program.
*Four other symbols are standard:

PREPARATION 

PREDEFINED PROCEDURE 

CONNECTOR 

OFF-PAGE CONNECTOR 

-Steve Johnson 9/25/83

***** CUSTOMIZING Z-TEXT *****

Z-TEXT HAS BECOME THE DE-FACTO STANDARD WORD PROCESSING PROGRAMMING PROGRAM FOR THE T/S FAMILY OF COMPUTERS. THERE ARE PLENTY OF OTHER PROGRAMS "OUT THERE," BUT DISTRIBUTION AND PRICE HAVE MADE Z-TEXT PREEMINENT.

Z-TEXT OFFERS A VARIETY OF USEFUL FUNCTIONS, COMBINED WITH A FAIRLY CONSISTENTLY DEFINED SYSTEM OF COMMANDS. THINGS CAN BE IMPROVED, HOWEVER.

1) THE RIGHT JUSTIFICATION FUNCTION IS IMPRESSIVE AT FIRST GLANCE, BUT CAN LEAD TO DIFFUCULTIES IN READING THE COPY PRODUCED; ESPECIALLY WHEN USING SMALLER COLUMN WIDTH MATERIAL, AS HERE. IT MIGHT BE BETTER TO ADD SINGLE SPACES BETWEEN WORDS.

THIS CAN BE DONE. ADD:

```
1001 LET NOJ=0
2153 IF NOJ THEN GOTO 2190
2634 IF C$="J" THEN LET NOJ=N
```

YOU CAN USE THIS FEATURE JUST AS YOU WOULD ANY OTHER Z-TEXT CONTROL COMMAND. START A LINE WITH .J01 TO DEFEAT THE RIGHT JUSTIFICATION, OR .J00 TO ENABLE IT. THIS BYPASSES THE PORTION OF THE SUBROUTINE THAT ADDS THE EXTRA SPACES.

THE RESULTING COPY IS SOMEWHAT MORE READABLE, WITHOUT THE ANNOYING GAPS THAT FORCE THE READER TO HUNT FOR THE NEXT WORD IN THE LINE.

2) THE NEXT ENHANCEMENT CAME OUT OF TRYING TO GET THIS ARTICLE IN A SUITABLE FORM. WHEN EXPERIMENTING WITH THE VARIOUS PRINTER CONTROLS, IT GETS VERY TEDIOUS WAITING FOR THE PRINT SUBROUTINE TO CHEW ITS WAY DOWN TO THE SPOT WHERE YOU ARE WORKING. BY ADDING THE LINE:

```
2007 LET J=CL-1
```

THE PRINTER WILL START FORMATTNG AT THE LINE INDICATED BY THE CURSOR. IT IS EASY ENOUGH TO POSITION THE CURSOR AS DESIRED, EITHER AT THE BEGINNING, WITH "B", OR AT ANY OTHER POSITION, USING THE ARROW KEYS.

3) FOR THOSE OF YOU THAT HAVE INVESTED IN BIG LEAGUE PRINTERS, HERE"S ANOTHER MOD. THE MINDWARE INTERFACES THAT TRANSLATE SINCLAIRESE INTO ASCII CONSIDER INVERSE CHARACTERS AS LOWER CASE. IT"S EASY ENOUGH TO DO ALL YOUR TYPING IN GRAPHICS MODE, BUT SOME OF THE POSSIBLE COMBINATIONS RESULT IN CONTROL SIGNALS TO THE PRINTER. IN ADDITION, A FULL SCREEN OF INVERSE CHARACTERS CAN BE DIFFUCULT TO READ.

THE FOLLOWING ADDITION WILL CHANGE THE OUTPUT TO THE PRINTER, SO THAT CHARACTERS PRINTED IN INVERSE WILL BE CAPITALS, AND STANDARD VIDEO CHARACTERS WILL BE LOWER CASE.

```
2250 FOR I=1 TO LEN J$
2251 LET O$=O$+CHR$ (CODE J$(I)
+128*(J$(I)>"." AND J$(I) <"■")
-128*(J$(I)>"■"))
2253 NEXT I
```

LINE 2251 CHECKS EACH CHARACTER IN THE LINE TO BE PRINTED, AND CHANGES IT TO IT"S INVERSE. INVERSE PERIODS (■) FLAG CONTROL CHARACTERS IN THE MINDWARE INTERFACE, AND ARE LEFT ALONE.

THERE YOU HAVE IT. THANKS TO MR. ASHER"S CLEARLY WRITTEN CODE, AND HIS CHOICE OF BASIC TO MAKE IT FUNCTION, YOU CAN EASILY MODIFY Z-TEXT TO SUIT YOUR OWN PREJUDICES AND PREFERENCES. THE MAJOR PROBLEM REMAINING IS HIS USE OF "INPUT" TO TAKE THE TEXT INFORMATION. THIS PUTS THE USER AT THE MERCY OF THE SINCLAIR"S SLOW KEYBOARD HANDLING ROUTINES. A MACHINE CODE INPUT ROUTINE WOULD ALLOW FULL TYPING SPEED. LET"S SEE YOUR CODE...

MF

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Here's an exciting new product (new to us, anyway) that we're in the process of learning about. Here's a sample of it's output:

Dear Customer;
Thank you for purchasing Word Sinc II.
I hope that you will find it a useful & valuable addition to your computer system.
A lot of time & effort has gone into producing a program that will make the Timex or ZX Printer a really useful tool.

Yours truly
P. Hargrave.

THE SAMPLE ABOVE OF A WORD PROCESSOR IS AVAILABLE FOR USE WITH THE TS1000.

IF YOU ARE INTERESTED IN OBTAINING THIS PROGRAM WE WILL HAVE DETAILS AT THE OCTOBER 8th MEETING.

JULES

DATED MATERIAL

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECEIVE
DUES = $10 per year, per family.

Next CATS Meeting ** 2PM **********
Saturday, October 8, 1983
New Carrollton Public Library
7414 Riverdale Rd., New Carrollton, MD

TO: CIRCLE CHESS GROUP
(TIMEX/SINCLAIR USERS GROUP)
A.F.STANONIS
POB 63
DES PLAINES, IL 60017

2ND SAT of EACH Month at 2 PM

CATS Newsletter
P.O. Box 725
Bladensburg, MD 20710

The mailing address of the Capitol Area Timex/Sinclair User's Group is:

Capitol Area Timex/Sinclair User's Group
P.O. Box 725
Bladensburg, MD 20710

CATS is a non-profit special interest organization dedicated to serving the interests of those who own, use, or are interested in learning more about the Timex/Sinclair family of personal computers.

The official contact person for CATS is Jim Wallace: (301) 699-8712

Meetings are held on the second Saturday of each month at 2 p.m. in the large meeting room of the New Carrollton Branch Public Library.

Submissions for this publication are eagerly solicited. Publication of material does not transfer rights from the author; in fact, it may establish priority.

Submissions may be articles on applications, programming techniques, hardware, reviews, or anything else you can imagine. Letters and Unclassified ads (free to members, $1.00 otherwise) will be printed. Pertinent articles from other publications will also be considered.

I would prefer material to be typed, single spaced, in 3½" columns--but don't break your back--the Xerox dosen't really care.

Ham Radio Network Information

QZX Net --------- Wednesdays, 9p.m. local time; 14.345 MHz
NV4F NCS
Eastern Regional Sinclair Net -- Sundays, 1600 Z; 7.245 MHz
KQ2F NCS